



---

---

LABORATORY

OF THE

INLAND REVENUE DEPARTMENT

OTTAWA, CANADA

---

BULLETIN No. 364

---

MALT VINEGAR

---

---



### NOTES AND COMMENTS.

Under this heading, as occasion arises, the Bulletins issued by this Department will contain, as an appendix, such comment as may seem necessary or advisable upon matters relating to the work of the Department in connection with the administration of the Adulteration Act, the Fertilizers Act, the Feeding Stuffs Act or the Proprietary Medicines Act.

It frequently happens that correspondents ask information regarding the above Acts, of such a nature that the matter in question possesses general interest, and comment upon it would prove acceptable and useful to others than the immediate questioner. In such cases the reply may find a place in these columns. For convenience of reference these notes will be numbered in series.

A. MCGILL,  
*Chief Analyst.*

**LABORATORY**  
OF THE  
**INLAND REVENUE DEPARTMENT**  
**OTTAWA, CANADA**

**BULLETIN No. 364**

**MALT VINEGAR**

OTTAWA, February 13, 1917.

J. U. VINCENT, Esq., K.C.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report concerning 185 samples of Vinegar, the great majority of which were sold as Malt Vinegars.

The report consists of two parts. The first part (twenty-two samples) represents a special collection made in Vancouver and Victoria, in February, March and April of last year. This collection was made consequent upon specific complaint (see L-138566) to the effect that vinegar was being offered in British Columbia, as Malt Vinegar, which was in reality not Malt Vinegar, but a fraudulent imitation of the article. An examination of this report proves conclusively that the complaint was well founded, only 11 of the 22 samples being genuine.

Further investigation, however, showed that in several instances, the apparent fraud was due to incorrect reading of our standards for Vinegar, as published in G. 1096, dated December 29, 1913. The standards referred to provide for the sale of Blended Vinegar, which is defined as a mixture of two or more varieties of Vinegar. Most of the samples found to be illegal, were labelled in a manner to indicate that they were blended; but while the amount of Malt Vinegar in the blend was very small, the words Malt Vinegar were most conspicuous on the label, with the result of deceiving the purchaser into the belief that he was buying a genuine Malt Vinegar or at least an article which contained a large proportion of Malt Vinegar.

Since a comprehensive inspection of the article was proposed for June, July and August of 1916, it was considered reasonable to permit the offence, as above described, to be passed over with a formal warning.

The remainder of this report deals with 163 samples purchased in June, July and August of last year. Inspectors were carefully instructed to purchase Malt Vinegar only; and in most instances this instruction was observed. In the case of Mr. Inspector Audet, five samples (5353, 5356, 5359, 5361 and 5364) are invoiced simply as Vinegars. None of these samples are Malt Vinegars, and if sold as such, are adulterated under the Act. Mr. Inspector Audet has since explained (see his letter of March 1, 1917), that he demanded malt vinegar in every instance.

The subjoined synopsis gives the general results of this examination.

COLLECTION OF FEBRUARY, MARCH AND APRIL, 1916.

Found genuine Malt Vinegars . . . . .	11 samples.
Found not to be Malt Vinegars, but sold under names which implied Malt Vinegar either entirely or as a blend . . . . .	11 "
	—
	22 "



## COLLECTION OF JUNE TO AUGUST, 1916.

Found genuine Malt Vinegars.....	97 samples.
" adulterated under the Act.....	31 "
" slightly below standard and passed.....	35 "

Standards for Vinegar have been legalized since December 10, 1913; and Circular G. 1096 embodying these standards was published on December 30, 1913. Bulletin No. 313, which contains a detailed report of two hundred and forty-five samples of Vinegar, was published in May, 1915. I mention these facts to justify the conclusion that vendors of the article have been fully warned in the matter, and cannot reasonably urge any excuse for selling as Malt Vinegar an article which does not comply with legal requirements.

The characteristic constants of Malt Vinegar comprise a minimum content of solids (1.80 per cent) and a minimum content of mineral solids, or ash (0.20 per cent). Phosphates are characteristic of the ash of Malt Vinegar; and it will be found on examination of this report, that the amount of phosphoric acid is seldom less than about 40 to 50 milligrammes per 100cc. of Vinegar. In many cases it reaches a much higher number. Spirit Vinegar, on the other hand, contains but little ash, and the phosphoric acid content is trifling, or nil.

A considerable number of samples yield results which prove conclusively that malt has been employed in their manufacture. This industry is a new one in Canada, and it is fair to assume that failure to produce a perfectly satisfactory malt vinegar is rather due to inexperience than to any desire to put out a surrogate article. Being convinced of the essential truth of this assumption, I have ventured to pass all samples which give evidence of having been made from malt, even although such samples fail to reach the standard of a normal malt vinegar; and I would respectfully ask you to justify my interpretation, for this occasion. Of course it must be understood that such concession can form no precedent for future decisions; and that it is granted in recognition of the fact that honest efforts are being made by Canadian manufacturers to produce a malt vinegar which shall fully meet legal requirements.

When Acetic Acid is employed in the manufacture or fortification of a Vinegar, traces of formic acid are almost invariably found in a distillate from such Vinegar. Mr. Rowat, of this staff, has done a considerable amount of research work, at my request, for the purpose of establishing the following points:—

1. Do genuine Malt Vinegars yield a distillate which could be mistaken to contain formic acid?
2. If a genuine Malt Vinegar, not responding to the test for formic acid, be fortified by addition of commercial, refined acetic acid, will it then give the formic acid reaction?
3. If it does so, is the intensity of the reaction proportional to the amount of acetic acid added?

Mr. Rowat's work clearly shows that genuine Malt Vinegars give no reaction for formic acid when treated by the method of Williamson and Burwell (Allen, *Com. Org. Analysis*, 4th Edn. Vol. 1, page 521); that addition of commercial acetic acid, containing traces of formic acid, is readily detected; and that the depth of colour with fuchsin, is approximately proportional to the amount of acetic acid added.

I would respectfully recommend publication of this report as Bulletin No. 364.

I have the honour to be, Sir,  
Your obedient servant,

HILL  
Chief Analyst.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF VANCOUVER—

1916.								
Feb. 18	Vinegar	55496	Vancouver Pickle Co., 22 Water st., Van- couver, B.C.	3 bots.	45	B. C. Vinegar Works, Van- couver, B.C.		Distill' Malt Vinegar.
" 18	"	55497	B. C. Vinegar Works, 1365 Powell st., Van- couver, B.C.	3 "	60	Vendors .....		Pure Canadian Vinegar.
" 18	"	55498	" "	3 "	45	" .....		Mackenzie's Pure Spirit Malt Vinegar.
" 18	"	55499	" "	3 "	45	" .....		Pure Canadian Vinegar. Spe- cial.
" 18	"	55500	" "	3 "	75	Holbrook & Co., England.		"Sunset" Brand. Pur Malt Vine Bott- led by Vendors.
Mar. 13	"	55501	Quality Mfg. Co., 358 Broadway W., Van- couver, B.C.	3 "	25	B. C. Vinegar Works, Van- couver, B.C.		"Brown" Brand. Bottle by Ven- dors.
" 14	"	55502	Hobson Mfg. Co., Van- couver, B.C.	3 "	45	"		Spirit Malt. ...
" 14	"	55503	" "	3 "	75	H. J. Heinz Co., Pittsburgh.		"Golden West" Pure Malt Vin- egar.
" 30	"	55504	Crown Mfg. Co., 2749 Main st., Vancouver, B.C.	3 "	45	Unknown....		"Coronet" Brand. Brown Vinegar.
" 30	"	55505	" "	3 "	75	H. J. Heinz, Pittsburgh.		"Crown" Brand. Pure Malt Vin- egar.
April 4	"	55506	David Spencer, Ltd., Vancouver, B.C.	3 "	75	Kelly, Douglas & Co., Vancouver, B.C.		"Nabob" Brand. Pure Malt Vin- egar.
" 4	"	55507	Powell's Market, 52 Hasting st., E., Van- couver, B.C.	3 "	15	Pure Fruit Mfg. Co., Vancouver. B.C.		Pure Fruit Vin- egar. Blended.
" 4	"	55520	Anderson & Beney, Nel- son and Hornby sts., Vancouver, B.C.	3 "	45	Rex Mfg. Co., Vancouver.		"Rex" Brand. Spirit Malt Vinegar.

## MALT VINEGAR.

## Results of Analysis.

No. of Sample	As Acetic only Ppt. by weight, 100 cc.	Total Ash, Grams per 100 cc.	Water Soluble Ash, Grams per 100 cc.	Water Insoluble Ash, Grams per 100 cc.	Alkalinity of Water Soluble Ash, cc. N/10 Acid.	P.O. <sub>2</sub> in Water Soluble Ash, Mg. per 100 cc.	P.O. <sub>2</sub> in Water Insoluble Ash, Mg. per 100 cc.	Rotation 2 dm. at 20° C. Degrees Verdet.	Ppt. by Barium Test for SO <sub>4</sub> .	Ppt. by Silver Test for Cl.	Ppt. by Basic Lead Acetate.	Remarks and Opinion of the Chief Analyst.

## E. J. MORGAN, INSPECTOR.

1-0081	3-72	0-43	0-030	0-012	0-016	0-9	1-0	1-1	- 0-4	Nil ..	Nil ..	Nil ..	55496	Not malt vinegar. Sold as distilled malt vinegar.
1-0082	4-74	0-24	0-018	0-006	4-012	0-3	1-0	1-2	- 0-4	" ..	" ..	" ..	55497	Not malt vinegar. Sold as Canadian vinegar.
1-0088	4-00	0-47	0-000	0-024	0-000	0-3	5-6	7-6	- 1-6	Trace	Trace	Trace	55498	Not malt vinegar. Sold as spirit malt vinegar.
1-0083	4-73	0-24	0-020	0-006	0-014	0-3	1-0	1-2	- 0-4	Nil ..	Nil ..	Nil ..	55499	Not malt vinegar. Sold as Canadian vinegar.
1-0194	4-23	3-04	0-360	0-140	0-310	1-1	3-6	03-8	+ 3-0	He'vy	Me- dium.	Cop- ious.	55500	Genuine.
1-0074	3-27	0-46	0-030	0-006	0-014	0-8	1-0	1-4	- 0-8	Nil ..	Nil ..	Nil ..	55501	Not malt vinegar. Sold as brown grain vinegar.
1-0086	3-84	0-40	0-030	0-008	0-012	0-7	1-0	1-4	- 0-8	" ..	" ..	" ..	55502	Not malt vinegar. Sold as spirit malt vinegar.
1-0151	3-63	3-26	0-236	0-068	0-180	1-0	12-2	00-0	+ 0-4	Me- dium.	Me- dium.	Cop- ious.	55503	Genuine.
1-0070	3-27	0-34	0-044	0-000	0-018	1-1	0-8	1-4	- 0-4	Trace	Trace	Trace	55504	Not malt vinegar. Sold as brown vinegar.
1-0174	3-22	1-94	0-210	0-054	0-120	1-0	6-0	44-8	+ 0-2	Me- dium.	Me- dium.	Cop- ious	55505	Genuine.
1-0154	3-03	2-70	0-200	0-008	0-190	1-1	6-0	83-4	+ 0-4	"	Cop- ious.	"	55506	"
1-0062	2-47	0-51	0-018	0-004	0-012	0-4	0-4	1-2	- 0-4	Nil ..	Nil ..	Nil ..	55507	Not malt vinegar. Sold as fruit vine- gar, blend.
1-0077	3-40	0-44	0-010	0-006	0-004	0-4	0-7	1-4	- 0-4	" ..	" ..	" ..	55508	Not malt vinegar. Sold as spirit malt vinegar.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF VICTORIA—

1916.								
Feb. 21	Malt Vinegar	66652	Windsor Grocery, 817 Govt. st., Victoria, B.C.	3 bats.	1.05	Crosse & Blackwell, London, Eng.		
" 22	"	66656	Dixie H. Ross & Co., 1317 Govt. st., Victoria, B.C.	3 "	90	Holbrook & Co., London, Eng.		
" 22	"	66667	The West End Grocery, 1002 Govt. st., Victoria, B.C.	3 "	1.00	H. J. Heinz Co., Pittsburgh.		
" 24	"	66670	H. O. Kirkham & Co., 1109 Govt. st., Victoria, B.C.	3 "	69	H. J. Heinz Co., Leamington, Ont.		
" 24	"	66671	" " "	3 "	75	Midland Vinegar Co., Birmingham, Eng.		
" 24	"	66687	Acton Bros., 1317 Douglas st., Victoria, B.C.	3 "	75	White, Cotell & Co., Camberwell, London, Eng.		
" 26	"	66696	Linden Grocery, Linden ave., and May st., Victoria, B.C.	3 "	60	H. J. Heinz Co., Leamington, Ont.		
April 12	"	71342	W. J. Pendray & Sons, Ltd., Laurel Point,	3 pts.	25	B. C. Vinegar Works, Vancouver, B.C.		Spirit Malt Vinegar.
" 12	"	71343	Western Pickling Works, Victoria, B.C.	3 "	25	"		Pure Household Spirit Brown Grain Vinegar.

## MALT VINEGAR.

Results of Analysis.												No. of Sample.	Remarks and Opinion of the Chief Analyst.
Sp. Gr. at 15-6° c.	Acidity as Acetic anhy- dride p.c. by weight.	Total Solids. Grams per 100 cc.	Total Ash. Grams per 100 cc.	Water Soluble Ash. Grams per 100 cc.	Water Insoluble Ash. Grams per 100 cc.	Alkalinity of Water Soluble Ash. cc. N./10 Acid.	P.O. <sub>2</sub> in Water Soluble Ash. Mg. per 100 cc.	P.O. <sub>2</sub> in Water Insoluble Ash. Mg. per 100 cc.	Rotation 2 dm. at 20° c. Degrees Ventake.	Ppt. by Barium Test for SO <sub>4</sub> .	Ppt. by Silver Test for Cl.	Ppt. by Basic Lead Acetate.	

D. O'SULLIVAN, INSPECTOR.

1-0158	4-72	2-16	0-332	0-190	0-142	7-4	27-6	57-3	+ 0-4	Me- dium.	Cop- ious.	Cop- ious.	66652	Genuine.
1-0192	4-54	2-71	0-328	0-142	0-186	2-2	4-8	53-2	+ 3-8	He'vy	Me- dium.	"	66656	"
1-0175	4-38	2-76	0-268	0-094	0-174	2-5	9-4	78-1	+ 0-4	Me- dium.	"	"	66667	"
1-0163	4-06	2-51	0-260	0-078	0-183	1-7	5-6	82-2	+ 0-4	"	"	"	66670	"
1-0179	4-06	2-42	0-606	0-430	0-176	0-8	1-8	69-8	+ 1-0	"	"	"	66671	"
1-0160	4-56	1-86	0-398	0-240	0-158	5-5	16-4	57-2	+ 0-2	"	Cop- ious.	"	66687	"
1-0166	3-92	2-55	0-260	0-086	0-174	1-9	8-0	74-0	+ 0-4	"	Me- dium.	"	66696	"
1-0084	3-96	0-38	0-038	0-020	0-006	1-6	2-0	1-5	- 0-2	Nil ..	Nil ..	Nil ..	71342	Not malt vinegar. Sold as spirit malt vinegar.
1-0080	3-80	0-40	0-014	0-010	0-004	0-6	0-9	1-2	0-0	" ..	" ..	" ..	71343	Not malt vinegar. Sold as spirit brown grain vine- gar.

## BULLETIN No. 364—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cnst.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cost.	Manufacturer.	Furnisher.

## DISTRICT OF NOVA SCOTIA—

1914.							
Aug. 18	Malt Vinegar.	76321	Jas. Scott & Co., Halifax.	3 bots.	90	Cross & Blackwell, London, Eng.	Manufacturers.
" 18	"	76322	Wentzell's Ltd., Halifax.	3 "	60	Wilson Lytle & Badgeron, Toronto.	"
" 21	"	76323	T. F. Courtney Co., Halifax.	3 "	75	Holbrook Co., London, Eng.	Bauld Bros. Ltd., Halifax.
" 21	"	76324	John Tobin & Co., Halifax.	3 "	25	Furnell Co., Bristol, Eng.	.....
" 21	"	76325	Dillon Bros., Halifax.	3 "	45	.....	.....
" 22	"	76326	C. McNab, Dartmouth, N.S.	3 "	25	Holbrook Co., England.	Bauld Bros. Ltd., Halifax.
" 25	"	76327	Payzant & King, Halifax.	3 "	24	E. S. Tracy, Halifax.	Manufacturers...
" 26	"	76328	A. W. Smith & Co., Halifax.	3 "	40	Fardon's Vinegar Co., Ltd., England.	.....

## DISTRICT OF CAPE BRETON—

Aug. 1	Malt Vinegar.	63849	J. F. Miles, Sydney...	3 qts.	75	Cross & Blackwell, London, Eng.	.....
" 2	"	63853	D. M. McMillan, Sydney.	3 "	75	Holbrook & Co., London, Eng.	.....

## DISTRICT OF NEW BRUNSWICK—

July 6	Malt Vinegar.	69601	2 Barkers Ltd., St. John, N.B.	3 bots.	75	Holbrook & Co., London, Eng.	.....
" 6	"	69602	Walter Gilbert, St. John, N.B.	3 "	75	Macnochie Bros., London, Eng.	.....
" 6	"	69603	Dearborn & Co., St. John, N.B.	3 "	60	Furnell, Webb & Co., Bristol, Eng.	.....
" 10	"	69604	G. E. Barborn Co., Ltd., St. John, N.B.	3 "	60	Fardon's Vinegar Co., Ltd., Birmingham, Eng.	.....
" 10	"	69605	W. A. Simonds, St. John, N.B.	3 "	60	Geo. Hodge & Sons, Ltd., London, Eng.	.....
" 27	"	69606	Geo. T. Whelpley, Fredericton, N.B.	3 "	75	Largny, London, Eng.	.....
" 27	"	69607	A. E. Hardley, Fredericton, N.B.	3 "	20	Fardon's Vinegar Works, Ltd., Birmingham, Eng.	.....
Aug. 3	"	69608	W. B. McKay Co. Ltd., Sussex, N.B.	3 "	84	Holbrook & Co., Ltd., London, Eng.	.....
" 4	"	69609	J. T. Ryan, Moncton, N.B.	3 "	20	H. J. Heins Co., Pittsburg, Pa.	.....
" 4	"	69610	Reed Co., Ltd., Moncton, N.B.	3 "	75	Wilson, Lytle & Badgeron Co., Toronto.	.....

## MALT VINEGAR.

Inspector's Report. (Is not an expression of opinion).	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Acidity.		Total Solids gms. per 100 cc.	Total Ash gms. per 100 cc.	Phosphates P. O. mgms. per 100 cc.	Polarization in 2 dm. tube.	Lead Acetate pptc.	Formic Acid Test.		
	As Acetic gms. per 100 cc.	As Anhydride gms. per 100 cc.								

## R. J. WAUGH, INSPECTOR.

.....	5.82	4.90	2.56	0.35	84	-2.0	Copious.	.....	76381	Genuine.
.....	4.86	4.12	2.10	0.17	39	+2.0	"	.....	76382	Ash slightly below standard. Pass.
.....	4.86	4.12	2.56	0.25	64	+2.0	"	.....	76383	Genuine.
Bulk.....	4.41	3.77	2.31	0.22	54	+0.4	"	.....	76384	"
.....	5.40	4.59	0.73	0.04	8	0.0	Trifling.	.....	76385	Not malt vinegar. Adulterated.
Bulk.....	4.69	3.98	2.65	0.26	66	+3.2	Copious.	.....	76386	Genuine.
.....	4.32	3.97	0.23	0.00	Trace.	0.0	Nil.....	36.5	76387	Not malt vinegar. Adulterated.
.....	4.98	4.22	2.31	0.24	72	+1.4	Copious.	.....	76388	Genuine.

## E. F. MACKERN, INSPECTOR.

.....	5.46	4.64	2.61	0.28	61	-2.0	Copious.	.....	69649	Genuine.
.....	5.46	4.59	2.97	0.29	30	+3.2	"	.....	69650	"

## JOHN C. FERGUSON, INSPECTOR.

.....	4.86	4.12	2.56	0.26	42	+2.0	Copious.	.....	69501	Genuine.
.....	6.30	5.41	2.18	0.21	56	+8.2	"	.....	69502	"
.....	4.53	3.85	2.78	0.45	54	+3.6	"	.....	69503	"
.....	5.01	4.20	2.31	0.25	64	+1.2	"	.....	69504	"
.....	4.93	4.18	3.16	2.58	72	+1.6	"	.....	69505	"
Distilled.....	7.20	6.12	0.07	0.01	Trace.	-1.0	Nil.....	.....	69506	Not malt vinegar. Adulterated. Labelled distilled.
Bulk.....	4.20	3.57	2.61	0.44	65	+1.2	Copious.	.....	69507	Genuine.
.....	4.83	4.10	2.47	0.28	44	+2.0	"	.....	69508	"
.....	5.22	4.44	2.62	0.27	28	-0.4	"	.....	69509	"
.....	4.89	4.16	2.06	0.15	24	+1.6	"	.....	69510	Ash below standard. Pass.



## BULLETIN No. 364—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cent.	Manufacturer.	Furnisher.

## DISTRICT OF QUEBEC CITY—

1916.							
July 3	Malt Vinegar.	56771	Pierre Pageau, Lorette-ville, Que.	3 bots.	75	Crosse & Blackwell.	N. Turcotte, Quebec.
" 4	"	56772	A. Drolet, 712 St. Valier, Que.	3 "	75	Holbrook Co.	J. B. Renaud, Quebec.
" 4	"	56773	" " "	3 "	90	Heinz Co.	"
" 4	"	56774	Cantin & Frere, 271 St. Joseph, Que.	3 "	75	Crosse & Blackwell.	Turcotte & Frere
" 4	"	56775	O. Lacroix, 19 St. Joseph, Que.	3 "	90	Holbrook & Co., London.	J. B. Renaud...
" 4	"	56776	E. G. Turcotte, 74 Grain, Que.	3 "	75	Crosse & Blackwell.	Turcotte & Frere
" 4	"	56777	" " "	3 "	45	Holbrook & Co.	J. B. Renaud...
" 4	"	56778	C. S. Riverin, 55 Courcane, Que.	3 "	75	"	"
" 4	"	56779	" " "	3 "	60	Wilson's...	Langlois & Paradis.
" 4	"	56780	Myrand & Pouliot, 70 Couronne, Que.	3 "	90	H. J. Heinz Co., Pittsburg.	J. B. Renaud...

## DISTRICT OF QUEBEC PROVINCE—

July 11	Malt Vinegar.	5353	A. Lacasse, St. Claire...	3 bots.	8	St. Lawrence, Quebec.	
" 12	"	5356	Dorchester Lumber Co., St. Malachi.	3 "	15	Drouin Frere, Quebec.	
" 13	"	5359	D. Towel, St. Leon...	3 "	15	Dorchester Lumber Co., St. Malachi.	
" 14	"	5361	Lacasse & Audet, St. Edward.	3 "	15	"	
" 15	"	5364	G. Dussault, St. Marguerite.	3 "	15	Drouin Frere & Ratray, Quebec.	
June 20	"	72283	J. N. R. L'Esperance, Montmagny.	3 "	1.05	Holbrook & Co., London.	
" 27	"	5727	Eugene Lacas, St. Jerome.	3 "	60	Purcell, Ltd.	
" 27	"	5728	Charlesmagne Taillon, St. Jerome.	3 "	75		
" 27	"	5729	Pierre Simard, St. Jerome.	3 "	75	Fardon's Vinegar Co. Ltd.	
" 27	"	5730	C. E. Lafamme, St. Jerome.	3 "	60	Wilson Lytle Bagrow.	

## MALT VINEGAR.

Inspector's Report. (Is not an expres- sion of opinion.)	Results of Analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.	
	Acidity.		Total Solids gms. per 100 cc.	Total Ash gms. per 100 cc.	Phosphate $P_2O_5$ mgms. per 100 cc.	Polarization in 2 dm. tube.	Lead Acetate pptce.			Formic Acid test.
	As Acetic gms. per 100 cc.	As Anhydride gms. per 100 cc.								

## X. W. E. BELAND, INSPECTOR.

.....	5.70	4.64	2.24	0.30	78	-1.6	Copious	.....	56771	Genuine.
.....	5.52	4.69	2.08	0.33	50	+6.6	"	.....	56772	"
.....	5.16	4.39	2.94	0.28	36	-1.6	"	.....	56773	"
.....	5.58	4.74	2.47	0.30	92	-2.0	"	.....	56774	"
.....	5.52	4.69	2.60	0.32	43	+2.8	"	.....	56775	"
.....	5.80	4.84	2.93	0.33	88	+0.2	"	.....	56776	"
.....	5.34	4.54	2.57	0.40	66	+6.8	"	.....	56777	"
.....	5.40	4.59	2.52	0.26	68	+2.4	"	.....	56778	"
.....	4.74	4.03	2.63	0.26	32	+0.8	"	.....	56779	"
.....	5.22	4.44	2.70	0.27	64	-0.4	"	.....	56780	"

## J. E. AUDET, T. GENDREAU AND N. CADIEUX, TEMPORARY INSPECTORS.

.....	.....	.....	0.45	0.04	2	.....	Nega- tive.	.....	5363	No. malt vinegar, adulterated.
.....	.....	.....	0.23	0.03	3	.....	"	.....	5366	" "
.....	.....	.....	0.23	0.02	trace.	.....	"	.....	5369	" "
.....	.....	.....	0.26	0.03	4	.....	"	.....	5361	" "
.....	.....	.....	0.16	0.02	6	.....	"	.....	5364	" "
.....	.....	.....	3.33	0.36	40	.....	"	.....	72283	Genuine.
.....	.....	.....	3.03	0.41	30	.....	"	.....	5727	"
.....	.....	.....	1.86	0.16	24	.....	"	.....	5728	Ash low. Pass.
.....	.....	.....	2.78	0.29	42	.....	"	.....	5729	Genuine.
.....	.....	.....	1.85	0.13	24	.....	"	.....	5730	Ash low. Pass.

## BULLETIN No. 364

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF THREE RIVERS—

1916.							
June 26	Malt Vinegar.	5423	Camille Barrette, Joliette.	1 pt.	25	Crosse & Blackwell, London, England.	
" 27	"	5427	J. H. R. Dabois, St. Thomas, Joliette.	3 bota.	45	Holbrook Co., London, England.	
July 1	"	5440	Wm. Perrault, Joliette.	3 "	75	Crosse & Blackwell, London, England.	
" 4	"	5448	J. A. Boisvert, Joliette.	3 "	75	Holbrook & Co., London, England.	
" 6	"	5451	J. O. Daviault, Berthierville.	3 "	75	Crosse & Blackwell, London, England.	

## DISTRICT OF EASTERN TOWNSHIPS—

June 27	Malt Vinegar.	73611	S. Bourgeois & Co., St. Hyacinthe.	3 bota.	50	Wilson Badgerow...	
" 28	"	73612	P. J. Jiard, Richmond, P.Q.	3 "	65		
" 29	"	73613	McCrae Bros., Richmond, P.Q.	3 "	50	Geo. Hodge & Son...	
" 28	"	73614	Dand. Bedard, Richmond, P.Q.	3 "	50	Holbrook Co., London.	
" 29	"	73616	Thomas Hebert, St. Hyacinthe.	3 "	75	Chaput & fils, Montreal.	
Aug. 3	"	73661	John Donigan, Magog.	3 "	60	Geo. Hodge & Sons, Montreal.	
" 3	"	73662	G. Gosselin & Paradis, Magog.	3 "	75	Holbrook & Co., London, England.	
" 10	"	73663	N. Mitchell Co. Ltd., Granby.	3 "	75	Crosse & Blackwell, London, England.	
" 10	"	73664	W. D. Bradford, Granby.	3 "	75	Wilson, L. B., Co. Ltd., Toronto.	
" 10	"	73666	D. McDonald, Alexandria.	3 "	75	Geo. Hodge & Son, London.	

## DISTRICT OF MONTREAL—

Sept. 5	Malt Vinegar.	74641	P. Daoust, 140 St. Catherine st., Montreal.	3 bota.	45	Holbrook & Co....	
" 6	"	74642	Abramson & Basevitz, 25 Ontario street E., Montreal.	3 "	30	Chiver's.....	
" 6	"	74643	J. I. Mallette, 60 Ontario st. E., Montreal.	3 "	45	Wilson's .....	

## MALT VINEGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.						No. of Samples	Remarks and Opinion of the Chief Analyst.
	Total solids grs. per 100 cc.	Total Ash grs. per 100 cc.	Phosphates $P_2O_5$ mgms. per 100 cc.	Formic acid test.	Acidity as acetic acid.			

DR. V. P. LAVALLEE, INSPECTOR.

.....	2.30	0.29	50	Negative.	.....	5422	Genuine.
.....	2.60	0.32	32	"	.....	5427	"
.....	1.86	0.33	29	"	.....	5440	"
.....	2.20	0.37	28	"	.....	5448	"
.....	2.08	0.31	36	"	.....	5451	"

E. BLONDIN, TEMPORARY INSPECTOR, J. J. COSTIGAN, ACTING INSPECTOR.

.....	2.41	0.18	59	Negative.	.....	73611	Ash slightly low. Pass.
.....	3.56	0.40	28	"	.....	73612	Genuine,
.....	2.85	0.40	30	"	.....	73613	"
.....	2.20	0.32	28	"	.....	73614	"
.....	2.42	0.28	60	"	.....	73616	"
.....	2.56	0.41	33	"	.....	73651	"
.....	2.53	0.32	29	"	.....	73652	"
.....	2.20	0.30	22	"	.....	73653	"
.....	1.25	0.16	15	"	.....	73654	Ash low. Pass.
.....	2.00	0.44	40	"	.....	73655	Genuine.

D. J. KEARNEY, INSPECTOR.

.....	2.51	0.32	64	Negative.	.....	74041	Genuine.
.....	2.43	0.30	52	"	.....	74042	"
.....	1.65	0.26	46	"	.....	74043	Solids slightly low. Pass.



## BULLETIN No. 364—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cost.	Manufacturer.	Furnisher.

## DISTRICT OF MONTREAL—

1916.							
Sept. 6	Malt Vinegar.	74844	Moguin Frere, 120 St. Denis st., Montreal.	3 bots.	90	Crosse & Blackwell..	
" 6	"	74845	J. D. Gilmour Co., 12 St. Paul street W., Montreal.	3 "	30	The Lion Vinegar Co	
" 8	"	74846	Goodwins Ltd., St. Catherine street W., Montreal.	3 "	100	H. J. Heinz Co. ....	
" 8	"	74947	" "	3 "	60	Geo. Hodge & Son, Ltd.	
" 9	"	74848	R. Walsh, 376 Dorchester st. W., Montreal.	3 "	30	Fardon's Vinegar Co	
" 8	"	74849	Almy's Ltd., St. Catherine st. W., Montreal.	3 "	60	Grimble's, London, Eng.	
" 8	"	74950	" "	3 "	75	Midland Vinegar Co.	

## DISTRICT OF VALLEYFIELD—

Aug. 1	Malt Vinegar.	74901	G. Pilon, St. Zotique P.Q.	3 bots.	45	Crosse & Blackwell..	
--------	---------------	-------	----------------------------	---------	----	----------------------	--

## DISTRICT OF OTTAWA—

July 12	Malt Vinegar.	73659	Wm. Lorimer, Brockville.	1 bot.	25	Grimbles, London, Eng.	
" 15	"	73661	E. D. Osborne, Arnprior.	1 qt.	10	Forbes Bros., Arnprior.	
" 18	"	73674	W. G. Cummings, Britannia Bay.	1 "	30	Lion Vinegar Co, Montreal.	F. J. Castle Co., Ottawa.
" 19	"	73675	C. Goulet & fils, 289 Rochester street, Ottawa.	3 bots.	45	Wilson, Lytle, Badgerow Co., Ltd., Toronto.	
" 20	"	73676	E. M. Lerner & Son, By ward market, Ottawa.	3 "	25	The T. A. Lytle Co., Toronto.	
" 21	"	73678	R. C. Cummings, Cummings Bridge.	1 qt.	20	S. J. Major, Ltd., Ottawa.	
" 24	"	73683	H. Shore, 510 Bank st., Ottawa.	3 bots.	75	The Turner Co. Ltd., Toronto.	
Aug. 10	"	73686	F. W. Dent, Rockland.	3 "	75	Sir Robert Burnett & Co., London.	H. N. Bate & Son, Ottawa.
" 23	"	73687	The Sanitary Grocery, 316 Nelson street, Ottawa.	3 "	30	The T. A. Lytle Co., Ltd., Toronto.	Lerner & Son, Ottawa.
" 23	"	73688	Trudel Frere, 291 Le Breton st., Ottawa.	3 "	75	Canadian Distributing Co., Toronto.	

## MALT VINEGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total solids grms. per 100 cc.	Total Ash grms. per 100 cc.	Phosphates P, O <sub>5</sub> mgms. per 100 cc.	Formic acid test.	Acidity as acetic acid.		

Concluded.

.....	1.08	0.31	80	Negative..	.....	74844	Genuine.
.....	1.54	0.31	34	"	.....	74845	Solids low. Pass.
.....	2.27	0.25	53	"	.....	74846	Genuine.
.....	1.60	0.26	75	Fairly positive.	.....	74847	Solids low. Pass.
.....	1.03	0.26	70	Negative..	.....	74848	Genuine.
.....	1.15	0.18	52	"	.....	74849	Solids and ash low. Pass.
.....	2.51	0.42	74	"	.....	74850	Genuine.

J. J. COSTIGAN, ACTING INSPECTOR.

.....	2.01	0.32	44	Negative..	.....	74901	Genuine.
-------	------	------	----	------------	-------	-------	----------

J. A. RICKEY, INSPECTOR.

Guaranteed pure.....	1.41	0.18	38	Negative..	.....	73659	Solids and ash low. Pass.
Brook, Arn.....	3.64	0.41	34	Trace.....	.....	73661	Genuine.
Castle Co., Va.....	1.61	0.23	16	Negative..	.....	73674	Solids slightly low. Pass.
Wilson's English malt Vinegar pure.....	1.86	0.16	32	"	.....	73675	Ash slightly low. Pass.
Pure English malt vin- egar.....	2.31	0.64	32	"	.....	73676	Genuine.
Major, Ltd., Va.....	2.20	0.41	34	"	.....	73678	"
Finest English malt vin- egar, three star quality.	0.66	0.05	32	Strongly positive.	.....	73683	Not malt vinegar. Adul- terated.
Bate & Son, Va.....	2.50	0.25	58	Negative..	.....	73686	Genuine.
Pure English malt vin- egar.....	2.13	0.18	34	Trace.....	.....	73687	Ash slightly low. Pass.
Pure English malt vin- egar. " Mary Pick- ford."	2.29	0.17	40	Negative..	.....	73688	" " " "

## BULLETIN No. 364—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF KINGSTON—

1915.							
July	3 Malt Vinegar.	73634	Sam Sleeman, Port Hope.	3 bots.	30	Eby Blain, Ltd., Toronto.	
"	4 "	73635	W. H. Ireland, Trenton.	3 "	60	Wilson, Lytle & Badgerow Co., Toronto.	
"	4 "	73640	E. T. Marsh, Trenton.	3 "	60	Toronto Vinegar & Beverage Co., Tor.	
"	4 "	73645	The Beverly McDonald Co., Napanee.	3 "	75	The Turner Co., Ltd., Toronto.	
"	6 "	73647	H. S. Wilder, Kingston.	3 "	30	T. A. Lytle Co., Ltd., Toronto.	
"	6 "	73653	M. V. Ainslie, Kingston.	3 "	75	Grimble, London, Eng.	
"	7 "	73656	Kingston Vinegar Co., Kingston.	1 qt.	Nil.	Vendors	
"	7 "	73657	John M. Gordon, Kingston.	1 "	18	Midland Vinegar Co.	W. E. Patrick, Toronto.
Oct.	3 "	73665	Mitchell's Grocery, Peterboro.	3 bots.	60	The Turner Co., Ltd., Toronto.	
"	3 "	73666	Dawson Bros., Peterboro.	3 "	75	" "	
"	3 "	73697	Frank Darling, Peterboro.	3 "	75	" "	

## DISTRICT OF TORONTO—

July	14 Malt Vinegar.	75446	J. C. Steel, 1068 College St., Toronto.	3 bots.	6		
"	14 "	75447	J. Garbutt & Son, 120 Arthur St., Toronto.	3 "	30		Unknown
"	14 "	75448	J. Lundy, 109 Vaughan Road, Toronto.	3 "	30		F. Coward, Toronto.
"	14 "	75449	A. E. Way, 384 Oakland Ave., Toronto.	3 "	30	Geo. Hodge & Son, Ltd., London.	Armstrong & Palford, Toronto.
"	15 "	75450	W. Williams, 267 Parliament St., Toronto.	3 "	30	Wilson, Lytle & Badgerow, Toronto.	
"	19 "	75453	McDonald & McCann, 94 Avenue Rd., Tor.	3 "	45	E. Lasenby & Son, London, Eng.	
"	19 "	75454	J. Mulholland, 144 Avenue Road, Toronto.	3 "	50		Parsons, Brown & Co., Toronto.
"	21 "	75455	S. Zuckowitz, 166 Bathurst St., Toronto.	3 "	30		S. Patterson & Co., Toronto.
"	22 "	75456	Kemp Beverage Co., 784 Bathurst St., Tor.	3 "	25		
"	22 "	75457	J. Graham, 1241 Bloor St. W., Toronto.	3 "	30		Eby Blain, Ltd., Toronto.

## MALT VINEGAR.

Inspector's Report (is not an expression of opinion).	Results of Analysis.						Remarks and opinion of the Chief Analyst
	Total solids grs. per 100 cc.	Total ash grs. per 100 cc.	Phosphates P <sub>2</sub> O <sub>5</sub> mgms. per 100 cc.	Formic acid test.	Acidity as acetic acid.	No. of Sample.	

## J. A. RICKEY, ACTING INSPECTOR.

Pure English Malt Vinegar.	3.75	0.26	40	Negative.		73634	
Pure Malt Vinegar .....	3.18	0.19	30	"		73639	
Purnell's English Malt Vinegar.	3.05	0.27	42	"		73640	
Three Star Quality Finest English Malt Vinegar.	0.56	0.04	10	Strongly positive.		73645	Vinegar. Adulterated.
Pure English Malt Vinegar.	3.26	0.18	40	Negative.		73647	Slightly low. Pass.
Grimble's English Malt Vinegar..	1.20	0.17	42	"		73651	Solids and ash low. Pass.
"	1.08	0.12	26	"		73652	Solids and ash low. Pass.
"	2.54	0.47	44	"		73653	Genuine.
Labelled Three Star Quality Finest English Malt Vinegar. Distilled	0.05	0.05	NIL	0.013	3.57	73654	Not Malt Vinegar. Adulterated.
" " "	0.05	0.05	"	0.019	3.57	73655	
" " "	0.05	0.05	"	0.025	3.57	73656	

## H. J. DAGER, INSPECTOR.

	0.31	0.04	Trace.	Trace.		75446	Not Malt Vinegar. Adulterated.
Crown Brand. Pure Eng. Malt Vinegar.	1.06	0.15	10	Negative.		75447	Solids and phosphates low. Pass.
Canadian Pure Malt Vinegar.	1.26	0.16	24	"		75448	Solids and ash low. Pass.
Pure Malt Vinegar .....	1.79	0.25	50	"		75449	Genuine.
Pure Eng. Malt Vinegar. Bottled by vendor.	1.90	0.18	40	"		75450	Ash slightly low. Pass.
Pure Malt Vinegar ..	1.68	0.25	11	"		75453	Genuine.
"	1.70	0.15	18	"		75454	Solids and ash low. Pass.
Pure Eng. Malt Vinegar.	1.62	0.13	11	Trace.		75455	" "
" " "	1.08	0.14	24	Negative.		75456	" "
Bottled by vendors. Pure English Malt Vinegar.	2.58	0.24	30	"		75457	Genuine.



## BULLETIN No. 304—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF HAMILTON—

1910.							
June 26	Malt Vinegar.	73604	Dunn Bros., 123 James St. N., Hamilton.	8 bcks.	60	Wilson Lytle, Badgerow Co., Toronto	
" 26	"	73606	Peables Hobson & Co., King & McNabb St.	1 qt.	20	Holbrooks, London, Eng.	
" 27	"	73610	M. Cummings, James & Barton St.	2 bcks.	10	Unknown	Unknown
" 27	"	73611	S. Froman	"	30	R. M. Griffin, 28 Gore St., Hamilton	
" 27	"	73612	S. E. Smith, 346 James St. N.	"	30	Bard & Co., Hamilton	
" 30	"	73636	R. Peirson, St. Catherine.	"	30	T. A. Lytle Co., Toronto	
" 30	"	73637	Marshall's Grocery, Niagara Falls.	"	75	The Midland Vinegar Co., Birmingham, Eng.	
" 30	"	73638	Fred A. Berriman	"	45	W. Williams, 267 Parliament St., Toronto	
" 30	"	75401	Taylor & Pringle Co., Owen Sound.	"	30	Holbrook, Ltd., England.	
" 27	"	75402	D. A. McClean	"	30		T. A. Lytle Co., Toronto
" 29	"	75403	L. Taylor, 187 Paisley St., Guelph.	"	60	Wilson Lytle, Badgerow Co., Toronto	
" 29	"	75404	Jas. O'Brien, 5 Gordon Ave.	"	30		McPherson Glass Co., Ltd., Hamilton
" 29	"	75405	Jackson & Sons, 25 Wyndham St.	"	15	Wilson Lytle & Badgerow, Toronto	
July 4	"	75406	John Sloan, 98. Water St., Galt.	"	30	Midland Vinegar Co., Birmingham	
" 4	"	75407	Hugh Walters, 43 Main St., Galt.	"	75	Toronto Vinegar & Beverage Co., Toronto	
" 4	"	75409	Schell Bros., 12 King St., Berlin.	"	45	Macdonochie Bros., Ltd., London, Eng.	
" 5	"	75410	Crompton Grocery Co., Colborne St., Brantford.	"	00	James Turner Co. Ltd., Toronto	

c. 364—

## MALT VINEGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total solids grms. per 100 cc.	Total ash grms. per 100 cc.	Phosphates P <sub>2</sub> O <sub>5</sub> mgms. per 100 cc.	Formic acid to cc.	Acidity as acetic acid.		
Pure English Malt Vin- egar.	1.68	0.14	30	Negative		73604	Solids and Ash low. Pass.
	3.71	0.	"	"		73605	Genuine.
	0.71		4	"		73610	Not Malt Vinegar. Adult- erated.
Pure English Malt Vin- egar.	1.67	19	26	"		73611	Genuine.
Pure English Malt Vin- egar. Old Glory Brand.	3.18	25	42	"		73612	"
Pure English Malt Vin- egar.	3.13	0.22	30	Trace		73626	"
Midland Malt Vinegar..	2.21	0.45	40	Negative		73637	"
Blue Label, Pure English Malt Vinegar.	0.15	0.02	2	Trace		73628	Not Malt Vinegar. Adult- erated.
	3.44	0.25	47	Negative		75401	Genuine.
Wilson's Pure English Malt Vinegar.	3.32	0.15	40	"		75402	Ash low. Pass.
Pure English Malt Vin- egar.	2.44	0.18	42	"		75403	Ash slightly low. Pass.
Pure English Malt Vin- egar Flag Brand.	3.75	0.47	50	Trace		75404	Genuine.
	3.00	0.15	21	Negative		75405	Ash low. Pass.
Midland Pure Malt Vin- egar.	2.41	0.41	36	"		75406	Genuine.
Purnell Pure English Malt Vinegar.	2.74	0.31	24	"		75407	"
English Malt Vinegar...	1.89	0.21	70	"		75409	"
Three Star Quality Eng- lish Malt Vinegar.	0.46	0.03	5	Strongly positive.		75410	Not Malt Vinegar. Adult- erated.

MILTON—

J. A. RICKEY AND J. DAGER, ACTING INSPECTORS.

Lytle Co.,  
ato.recon Glas-  
Hamil-

## BULLETIN No. 364—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher

## DISTRICT OF WINDSOR—

1910.							
July	4	Malt Vinegar.	65010 Jones & May, Exeter....	1 qt..	30	H. J. Heinz . . . . .	
"	5	"	65011 Gill Bros, Strathroy.....	3 bota.	75	Holbrook & Co., London, Eng.	
"	5	"	65015 R. H. Davis, Strathroy..	"	60	.....	Toronto Vinegar, & Beverage Co., Toronto.
"	5	"	65016 Wm. Cress, Strathroy....	"	30	Purnell's, Bristol, Eng.	
"	5	"	65017 W. G. Meekinson, Strathroy.	1 qt..	25	Crosse & Blackwell London, Eng.	
"	5	"	65018 Mihell & Gill, Strathroy..	3 bota.	75	Wilson Lytle Co., Toronto.	
"	6	"	65023 F. R. Dale, Port Stanley.	"	45	Holbrook & Co., London, Eng.	
"	6	"	65028 W. E. Lumby, St. Thomas, Ont.	"	45	T. A. Lytle Co., Toronto.	
"	6	"	65030 G. R. Rinn, St-Thomas, Ont.	"	45	.....	John Garvey & Sons, London, Ont.

## DISTRICT OF MANITOBA—

Aug.	23	Malt Vinegar.	75038 A. Lindsay & Son, Stoney Mountain.	3 bota.	75	Wilson Lytle, Badgerow Co., Toronto	
"	23	"	75039 P. J. Foley & Co., Stonewall.	"	75	Grosse & Blackwell, London, Eng.	
"	25	"	75041 Edward Tissot, St. Claude	"	30	.....	A. McDonald Co., Winnipeg.
"	25	"	75042 C. J. H. Arber, St-Claude	"	30	.....	
"	26	"	75043 A. R. Christie, 253 Portage Ave., Winnipeg.	"	75	Midland Vinegar Co., Birmingham, Eng.	
"	29	"	75044 W. Ephstein, West Selkirk	"	40	.....	
"	29	"	75045 Atrubin & Co., West Selkirk.	"	15	.....	
"	29	"	75046 D. Dalman, West Selkirk	"	45	.....	The Geo. McLean Co., Winnipeg.
"	29	"	75047 Shephard Pears & Co., West Selkirk.	"	35	.....	
"	30	"	75048 Fort Garry Market Co., Ltd, Garry St. Winnipeg.	"	75	Gold Standard Mfg Co., Winnipeg.	

## MALT VINEGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of analysis.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Total Solids gms. per 100 cc.	Ash gms. per 100 cc.	Phosphates $P_2O_5$ mgms. per 100 cc.	Formic Acid test.	Acidity as acetic Acid.	Lead Acetate pptn.	Polarization in 2 dm. tube.		

## JOHN TALBOT, INSPECTOR.

.....	2.35	0.22	14	Negative	.....	.....	.....	65010	Genuine.
.....	2.44	0.32	14	"	.....	.....	.....	65011	"
Purnell's English Malt Vinegar.	2.44	0.29	44	"	.....	.....	.....	65015	"
" "	3.35	0.64	19	"	.....	.....	.....	65016	"
.....	1.83	0.29	36	"	.....	.....	.....	65017	"
.....	2.03	0.17	42	"	.....	.....	.....	65018	"
.....	2.45	0.32	11	"	.....	.....	.....	65023	"
Pure English Malt Vinegar.	1.86	0.13	36	"	.....	.....	.....	65028	Ash low. Pass.
Quaker Pure English Malt Vinegar.	0.85	0.06	6	Trace.	.....	.....	.....	65030	Not Malt Vinegar, Adulterated.

## J. B. COSGROVE, INSPECTOR.

Wilson Brand.....	2.10	0.16	35	.....	4.03	Copious.	+2.2	75038	Ash slightly low.
.....	2.34	0.32	78	.....	4.39	"	+1.3	75039	Genuine.
Donald Co., Winnipeg.	0.40	0.09	Trace.	.....	5.56	Nil.	Zero.	75041	Not Malt Vinegar. Adulterated.
.....	1.44	0.13	"	.....	6.02	"	"	75042	Solids, Ash and Phosphates low. Adulterated.
No. 24 Quality....	2.28	0.48	86	.....	4.39	Copious.	+1.1	75043	Genuine.
Bulk.....	0.37	0.05	None.	.....	3.01	Nil.	Zero.	75044	Not Malt Vinegar, Acidity too low. Adulterated.
"	0.49	0.12	"	.....	3.83	"	"	75045	Not Malt Vinegar, Adulterated.
"	0.37	0.03	"	.....	4.03	"	"	75046	Not Malt Vinegar, Adulterated.
"	0.68	0.05	Trace.	.....	6.78	"	"	75047	Not Malt Vinegar, Adulterated.
.....	2.18	0.17	44	.....	4.06	Copious.	+2.8	75048	Genuine.



## BULLETIN No. 364—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Vendor as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

## DISTRICT OF ALBERTA—

1916.							
July 29	Malt Vin-egar.	52491	The Good Co., Lethbridge	3 bots	90	Holbrook & Co., London, Eng.	.....
" 29	"	52492	Campbell, Wilson & Horne Lethbridge.	3 "	60	Wilson, Lytle & Badgerow Co., Toronto.	.....
Aug. 1	"	52493	Geo. I. Wood, Calgary....	3 "	1 06	Crosse & Blackwell London, Eng.	.....
" 1	"	52494	John Irwin, " ....	3 "	90	Midland Vinegar Co., Birmingham	.....
" 1	"	52495	J. T. MacDonald, " ....	3 "	75	.....	Georgeson & Co. Calgary.
" 1	"	52496	S. G. Freeze, " ....	3 "	75	Midland Vinegar Co., Birmingham	.....
" 1	"	52497	J. K. Wilcox, 8th Avenue Calgary.	3 "	75	Wilson, Lytle & Badgerow Co., Toronto.	.....
" 1	"	52498	Samuel Smith, City Market, Calgary.	3 "	30	Polar Aerated Water Works Calgary.	.....
" 3	"	52499	Hudson's Bay Company, Calgary.	3 "	60	Crosse & Blackwell London, Eng.	.....
" 3	"	52500	" " "	3 "	75	Wilson, Lytle & Badgerow Co., Toronto.	.....

## DISTRICT OF ROCKY MOUNTAINS—

July 5	Malt Vin-egar.	68249	Joy Bros., Nelson, B.C....	3 "	90	Crosse & Blackwell London.	.....
" 5	"	68250	" " "	3 "	60	Holbrook & Co., London.	.....
" 24	"	68262	Agnew & Co., Rossland, B.C.	3 "	1 05	White Cottell & Co., London.	.....
" 24	"	68263	N. Laface, " "	3 "	1 05	Grimble & Co., London.	.....
" 24	"	68265	C. Nigro, " "	3 "	75	Taylor & Pringle, Owen Sound.	.....
" 24	"	68266	Hunter Bros., " "	3 "	35	H. J. Heints Co., Leamington.	.....
Aug. 7	"	68270	Knight & Barnes, Phoenix B.C.	3 "	75	Empress Mfg. Co., Vancouver.	.....
" 7	"	68271	Morrin, Thompson & Co., Phoenix, B.C.	3 "	45	.....	.....
" 15	"	68276	Merritt Cash Store, Mer-rit, B.C.	3 "	80	Kelly Douglas & Co., Vancouver.	.....
" 15	"	68277	" " "	3 "	60	B. C. Vinegar Works. Vancou-ver.	.....

## MALT VINEGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							No. of Sample.	Remarks, and opinion of the Chief Analyst.
	Acidity as Acetic gms. per 100cc.	Total Solids gms. per 100 cc.	Ash, gms per 100cc.	Phosphates P <sub>2</sub> O <sub>5</sub> magna per 100cc.	Lead Acetate ppt.	Polarisation in 2dm. tube.	Sp. gr. at 15° C.		

## A. W. R. MARKLEY, INSPECTOR.

.....	4.54	2.88	0.32	57	Copious	+3.5	.....	52491	Genuine.
Pure English Malt...	3.98	2.50	0.15	42	"	+1.0	.....	52492	Ash low. Pass.
.....	4.54	3.09	0.31	72	"	+1.6	.....	52493	Genuine.
.....	4.44	2.62	0.42	78	"	+0.8	.....	52494	"
Rajah Brand.....	3.57	0.33	0.02	None.	Nil....	Zero.	.....	52495	Not malt vinegar Adulterated.
.....	4.44	2.55	0.44	72	Copious	+1.0	.....	52496	Genuine.
Pure English Malt...	4.13	2.42	0.13	32	"	+2.2	.....	52497	Ash low. Pass.
Pure Spirit Malt...	3.83	0.42	0.05	Trace.	Trifling.	Zero.	.....	52498	Not Malt Vinegar. Adulterated.
Polar Vinegar.....	4.64	2.37	0.30	76	Copious	+2.0	.....	52499	Genuine.
Pure English Malt...	4.23	2.32	0.14	38	"	+3.0	.....	52500	Ash low. Pass.

## THOS. PARKER, INSPECTOR.

.....	4.52	2.27	0.32	85	Copious	+0.5	1.0158	68249	Genuine.
.....	4.56	2.66	0.31	51	"	+3.5	1.0194	68250	"
.....	4.50	1.80	0.37	67	"	+0.2	1.0150	68262	"
.....	3.70	1.92	0.24	59	"	+3.0	1.0145	68263	"
.....	3.99	0.93	0.08	16	Trifling.	+1.0	1.0106	68265	Not Malt Vinegar. Adulterated.
.....	4.34	2.81	0.28	78	Copious	+0.5	1.0171	68266	Genuine.
Climax Brand....	2.92	0.64	0.01	2	Nil....	-0.5	1.0074	68270	Not Malt Vinegar. Acidity too low. Adulterated.
.....	8.25	0.99	0.07	4	"	0.0	1.0175	68271	Not Malt Vinegar. Adulterated.
Nabob Brand.....	3.84	2.64	0.20	69	Copious	+1.0	1.0157	68276	Genuine.
Labelled; MacKen- zie's Pure Spirit Malt Vinegar. Blended* Made from pure grains, under Government supervision. The word "Blended" is stencilled on, is very indistinct.	2.84	0.39	0.02	2	Nil....	-0.5	1.0065	68277	Labeled as blend. Acidity too low. Adulterated.

## BULLETIN No. 364—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cost.	Manufacturer.	Furnisher.

## DISTRICT OF VANCOUVER—

1916.							
July	4	Malt Vinegar.	55652 McCulloch Bros., 423 Hastings St., E., Van.	3 botls.	75	Kelly, Douglas & Co., Ltd., Van.	.....
"	6	"	55655 Hugh Miller, 30 East 25th Ave., So., Van.	3 "	75	Purnell's, Bristol, Eng.	.....
"	4	"	55656 James Walden, 4112 Main St., Van.	3 "	75	Holbrook's, London, Eng.	.....
"	4	"	55657 R. J. Barnard, 2751 Main St., Van.	3 "	1-20	H. J. Heinz Co., Pittsburg, Pa.	.....
"	4	"	55658 Powell's Market, 58 Hastings St., E., Van.	3 "	75	W. H. Malkin Co., Ltd., Van.	.....
"	5	"	55659 Hobson Mfg. Co., 1923 Granville St., Van.	3 "	25	H. J. Heinz Co., Pittsburg, Pa.	.....
"	5	"	55660 " " "	3 "	75	" "	.....
"	5	"	55661 Empress Mfg. Co., Ltd., Van.	3 "	nil.	Vendors.....	.....
"	5	"	55663 Efford Bros., 573 Broadway, Van.	3 "	75	Crown Mfg. Co., Van.	.....
"	7	"	55671 B. C. Vinegar Works, 1365 Powell St., Van.	3 "	75	Vendors ....	.....

## MALT VINEGAR.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.							Remarks and Opinion of the Chief Analyst.
	Sp. gr. at 15° C.	Acidity as anhydride p.c. by weight.	Total Solids gms. per 100 c.c.	Total Ash gms. per 100 c.c.	Phosphates $P_2O_5$ mgms. per 100 cc.	Rotation in 2 dm. tube.	Ppt. with basic lead acetate.	
								No. of Sample.

C. S. EMES, INSPECTOR.

Nabob Brand...	1.0137	3.78	2.01	0.23	84	+ 0.5	Copious.	55652	Genuine.
.....	1.0242	4.24	4.08	0.88	70	+ 1.0	"	55655	"
.....	1.0180	4.54	2.85	0.33	68	+ 3.0	"	55656	"
.....	1.0100	4.20	2.73	0.27	86	+ 0.5	"	55657	"
Malkin's Best Brand.	1.0149	4.12	2.08	0.16	48	+ 1.0	Distinct	55658	Ash low. Pass.
Draught.....	1.0149	4.07	2.21	0.26	90	+ 0.5	Copious.	55659	Genuine.
Golden West Brand.	1.0146	4.06	2.26	0.26	73	+ 0.5	"	55660	"
Draught.....	1.0150	4.00	2.24	0.16	44	+ 0.7	Distinct	55661	Ash low. Pass.
Crown Brand...	1.0089	3.51	1.30	0.16	47	+ 0.2	"	55663	Acidity too low. Adulterated.
Sunset Brand...	1.0194	4.31	3.04	0.33	61	+ 1.5	Copious.	55671	Genuine.